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EXAMINER	
VU, MICHAEL T	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/802,391	HWANG ET AL.	
	Examiner	Art Unit	
	Michael Vu	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-49 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-49 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/26/2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-28, 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2004/0192308) in view of Nishimura (US 2004/0229649), and further in view of Gopalakrishna (US 2002/0183053).

Regarding **claims 1, 4, 7, 9-12, and 48**, Lee teaches a method of configuring a radio uplink, comprising: sending information having a cell specific parameter (Fig. 1, Mobile stations/User Equipment #112, 114, 116, 118 to Base Station/Node B #110), a

radio link specific parameter (Fig. 1) [0006-0008]), respective messages on an interface between a network element and a radio network controller for configuring the radio uplink (Figs. 4-10, [0057-0072]), configuring the radio uplink at the network element [0020-0026],

But Lee does not clearly teach on sending a payload packet from the user equipment to the network element over the radio uplink after the uplink is configured at the network element and sending the payload packet to the radio network controller.

However, Nishimura teaches sending a data/payload from mobile device via base station to the radio network controller over the radio uplink [0065, 0085], and Figure #1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that sending a payload packet from the user equipment to the network element over the radio uplink after the uplink is configured at the network element and sending the payload packet to the radio network controller, to optimize the performance of handover without causing loss of data.

But Lee/Nishimura do not clearly teach on wherein at least one of said respective messages enables said configuring the radio uplink.

However, Gopalakrishna teaches a system for testing macrodiversity and handover functionality of an RNC. The system includes a plurality of modules for simulating user equipment functionality and node B functionality in order to trigger a macrodiversity or handover function at an RNC. In one embodiment, the system communicates with the RNC to establish a simulated call. The call is initially set up over

a single radio path. The system then sends signal quality parameters indicating that the signal quality associated with the simulated call is below a threshold value. The signal quality parameters trigger the RNC to communicate with the system to establish a new radio path for the simulated call. In the uplink direction, the system sends data simulating the multiple radio paths to the RNC. In the downlink direction, the system receives data sent over multiple lub interface connections from the RNC and combines the data from the multiple connections. In addition to triggering macrodiversity functions at the RNC, the test system triggers the RNC to perform soft, softer, and hard handovers (See paragraphs [0009, 0023-0034, 0048-0057]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that wherein at least one of said respective messages enables said configuring the radio uplink, to establish the multiple radio paths between the user equipment, nodes, and the radio network controller for providing macrodiversity such as soft handovers and softer handovers to optimize the performance of handover without causing loss of data.

Regarding **claim 2,** Lee/Nishimura/Gopalakrishna teach the method of claim 1, further comprising: acknowledging correct reception of the payload packet at the network element on a radio downlink from the network element to the user equipment, and sending the payload packet from the network element to the radio network controller following said correct reception from the user equipment (Figures #2, and #5, [0017-0019]) of Lee.

Regarding **claim 3,** Lee/Nishimura/Gopalakrishna teach the method of claim 1, further comprising sending the information on an interface between the radio network controller and another radio network controller for relay to another network element for configuring an uplink between the other network element and the user equipment (Figs. #4-10, [0052-0072]) of Lee.

Regarding **claim 13,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 12, characterized in that transmission of the payload packet from the user equipment to the network element is followed by acknowledgement of correct reception of the payload packet by the network element on a radio downlink from the network element to the user equipment and transmission of the payload packet from the network element to the radio network controller [0023-0034] of Gopalakrishna.

Regarding **claim 14,** Lee/Nishimura/Gopalakrishna teach the method of claim 3, wherein said configuring the uplink between the other network element and the user equipment comprises the steps of configuring the uplink between the other network element and the user equipment followed by sending the payload packet from the user equipment to the other network element over the radio uplink between the user equipment and the other network element for sending the payload packet to the radio network controller [0023-0034] of Gopalakrishna.

Regarding **claim 15,** Lee/Nishimura/Gopalakrishna teach the method of claim 14, further comprising the steps of: acknowledging correct reception of the payload packet at the network element on a radio downlink from the network element to the user equipment, and acknowledging correct reception of the payload packet at the other

network element on a radio downlink from the other network element to the user equipment [0048-0057] of Gopalakrishna.

Regarding **claim 16,** Lee/Nishimura/Gopalakrishna teach the method of claim 1 wherein prior to said step of sending said information element on said interface between said network element and said radio network controller, said radio network controller decides a value for said cell specific parameter or said radio link specific parameter, or both, for said sending said information element with said cell specific parameter and said radio link specific parameter in said one or more messages on said interface from said radio network controller to said network element [0023-0034] of Gopalakrishna.

Regarding **claim 19,** Lee/Nishimura/Gopalakrishna teach the mobile telecommunications system of claim 4, wherein said configuring the uplink between the other network element and the user equipment comprises configuring the uplink between the other network element and the user equipment followed by sending the payload packet from the user equipment to the other network element over the radio uplink between the user equipment and the other network element for sending the payload packet to the radio network controller [0023-0034] of Gopalakrishna.

Regarding **claim 20,** Lee/Nishimura/Gopalakrishna teach the mobile telecommunications system of claim 19, further characterized in that correct reception of the payload packet at the network element is acknowledged on a radio downlink from the network element to the user equipment, and correct reception of the payload packet at the other network element is acknowledged on a radio downlink from the other network element to the user equipment [0023-0034] of Gopalakrishna.

Regarding **claim 17,** Lee/Nishimura/Gopalakrishna teach the method of claim 1, wherein said step of sending by said radio network controller includes sending at least one parameter to said network element indicative of boundaries within which choices may be made by said network element (Figs. 4-10, [0052-0072]) of Lee.

Regarding **claim 18,** the combination of Lee/Nishimura/Gopalakrishna teach the method of claim 1, wherein said radio network controller is responsive to signaling from said network element with a proposed value or values for said cell specific parameter, said radio link specific parameter, or both, and said radio network controller carries out said step of sending said information element either confirming or changing said proposed value or values (Figs. 4-10, [0052-0072]) of Lee.

Regarding **claim 5,** Lee/Nishimura/Gopalakrishna teach the system of claim 4, further characterized in that reception of the payload packet is acknowledged by the network element on a radio downlink from the network element to the user equipment, and that the payload packet is sent from the network element to the radio network controller following reception from the user equipment (Figs. 1-3, [0007-0055]) of Nishimura.

Regarding **claim 6,** the combination of Lee/Nishimura/Gopalakrishna teach the system of claim 5, further characterized in that the information element is sent on an interface between the radio network controller and another radio network controller for relay to another network element (Figs. 1-3, [0007-0055]) of Nishimura.

Regarding **claim 21,** Lee/Nishimura/Gopalakrishna teach the mobile telecommunications system of claim 4, wherein the radio network controller decides a

value for said cell specific parameter or said radio link specific parameter, or both, prior to said information element being conveyed on said interface between the network element and the radio network controller (Figs. 1-3, [0007-0055]) of Nishimura.

Regarding **claim 22,** Lee/Nishimura/Gopalakrishna teach the mobile telecommunications system of claim 4, characterized in that said radio network controller is arranged to send at least one parameter to the network element indicative of boundaries within which choices may be made by said network element for said configuring said radio uplink (Figs. 1-10, [0005-0072]) of Lee.

Regarding **claim 23,** the combination of Lee/Nishimura/Gopalakrishna teach the mobile telecommunications system of claim 4, characterized in that said radio network controller is responsive to signaling from said network element within proposed value or values for said cell specific parameter, said radio link parameter, or both, and said radio network controller conveys said one or more messages either confirming or changing said proposed value or values (Figs.1-10, [0005-0072]) of Lee.

Regarding **claim 8,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 7, characterized in that transmission of the payload packet from the user equipment to the network element is followed by acknowledgement of con-ect reception of the payload packet by the network element on a radio downlink from the network element to the user equipment and transmission of the payload packet from the network element to the radio network controller [0023-0034] Gopalakrishna.

Regarding **claim 24,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 7, characterized in that said cell specific parameter of said information element is

included in a cell setup request message, a cell reconfiguration request message, a common transport channel setup message, a common transport channel reconfiguration request message, a physical shared channel reconfiguration request message or a new message defined from the radio network controller to the network element [0023-0034] Gopalakrishna.

Regarding **claim 25,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 24, wherein said information element comprises a parameter defining total allowable interference due to radio uplink users wherein a scheduler of said network element is not allowed to allow a sum of uplink user noise rise to exceed said parameter [0023-0034] Gopalakrishna.

Regarding **claim 26,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 7, wherein said information defines a target of a total uplink load of a cell for use by said network element in scheduling so as to optimize capacity in a cell [0023-0034] Gopalakrishna.

Regarding **claim 27,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 7, wherein said information is included in a radio link setup request message, a radio link reconfiguration prepare message, a radio link reconfiguration request message, or a new message defined for uplink parameter delivery [0023-0034] Gopalakrishna.

Regarding **claim 28,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 27, wherein parameters from the network element to the radio network controller can be added in a radio link setup response message, a radio link reconfiguration ready

message, a radio link reconfiguration response message or a new message defined for parameter delivery from the network element to the radio network controller [0023-0034] Gopalakrishna.

Regarding **claim 46,** the combination of Lee/Nishimura/Gopalakrishna teach the method of claim 1, wherein the information has both a cell specific parameter and a radio link specific parameter in the messages respectively [0056-0099] of Nishimura.

Regarding **claim 47,** Lee/Nishimura/Gopalakrishna teach the network element of claim 10, further comprising: wherein the network element is further arranged to acknowledge correct reception of the payload packet at the network element, on a radio downlink from the network element to the user equipment, and wherein the network element is further arranged to send the payload packet from the network element to the radio network controller following said correct reception from the user equipment (Figs. 1-3, [0007-0055]) of Nishimura.

Regarding **claim 49,** Lee/Nishimura/Gopalakrishna teach the network element of claim 48, further comprising: means for acknowledging correct reception of the payload packet at the network element, on a radio downlink from the network element to the user equipment, and means for sending the payload packet from the network element to the radio network controller following said correct reception from the user equipment (Figs. 1-3, [0007-0055]) of Nishimura.

Claims 29-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2004/0192308) in view of Nishimura (US 2004/0229649), in view of Gopalakrishna (US 2002/0183053), and further in view of Obuchi (US 2004/0015750.

4. Regarding **claim 29,** Lee/Nishimura/Gopalakrishna teach the data structure of claim 27, **But are silent on** wherein said information includes a network element TFCI threshold setting a maximum data rate TFC a scheduler of the network element is allowed to grant the user equipment wherein said information is for transfer from the radio network controller to the network element.

However, Obuchi teaches in the mobile telephone system, a communications system in which a plurality of transport CHs (or a logic CH) are multiplexed and mapped to the physical CH, and a control signal indicating the format of a transport CH is also mapped to the physical CH is being realized. For example, the W-CDMA, which is one-of the next-generation mobile telephone system (IMT-2000), corresponds to the above mentioned system. In the W-CDMA, the TrCH (Transport Channel) such as a voice signal, multimedia data, a control signal, etc. is multiplexed, and mapped to the physical CH for transmission. To improve the transmission efficiency, the mapping to the physical CH is changed in a physical frame unit if it is not necessary to transmit multimedia data during the communications, or a voice signal is unnecessary. At this time, a control signal indicating the format of the TrCH referred to as TFCI (Transport Format Combination Indicator) is used [0005-0006].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee/Nishimura/Gopalakrishna, such that wherein said information includes a network element TFCI threshold setting a maximum data rate TFC a scheduler of the network element is allowed to grant the user equipment wherein said information is for transfer from the radio network controller to the network element, to control the error rate in the wireless communication system.

Regarding **claim 30,** Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, wherein said information comprises a user equipment TFCI threshold for setting a maximum data rate TFC the user equipment is allowed to use wherein said information is for transfer from the radio network controller to the network element and which information is for use by a scheduler of the network element for adjusting said parameter independently and signaling it to the user equipment within limits set by the network element TFCI threshold [0051-0059] of Obuchi.

Regarding **claim 31,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized by an acknowledgement power offset information element for transfer from the radio network controller to the network element for use by the network element in setting a power of hybrid ARQ acknowledgement information transmission to the user equipment [0048-0057] of Gopalakrishna.

Regarding **claim 32,** Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized by said information comprising an acknowledgement repetition factor assigned by the radio network controller for defining how many times a hybrid ARQ is repeated [0025-0032, 0055] of Gopalakrishna.

Regarding **claim 33,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized in that said information comprises a rate grant power offset information element for transfer from the radio network controller to the network element for use by the network element in setting power of scheduling related downlink signaling [0052- 0056] of Lee.

Regarding **claim 34,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized by said information comprising a rate grant repetition factor information element assigned by the radio network controller to the network element defining how many times scheduled related downlink signaling is repeated [0025-0032, 0055] of Gopalakrishna.

Regarding **claim 35,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized by said information comprising a rate request power offset for transfer from the radio network controller to the network element for use by the network element in evaluating power offset applied by the user equipment to uplink related scheduling signaling [0025-0032, 0055] of Gopalakrishna.

Regarding **claim 36,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized in that said information comprises a rate request repetition factor information element assigned by the radio network controller to the network element for use by the network element when it receives rate request information from the user equipment for defining how many times scheduling related uplink signaling is repeated [0025-0032, 0055] of Gopalakrishna.

Regarding **claim 37,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized in that said information comprises a user equipment threshold Dtx information element assigned by the radio network controller to the network element so that a scheduler of said network element will lower a said UETFCI threshold to a value of said user equipment threshold Dtx after Said user equipment has been inactive for a set period [0051-0059] of Obuchi.

Regarding **claim 38,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 37, characterized by said information comprising a user equipment threshold Dtx delay information element assigned by the radio network controller to the network element for defining an inactivity period after which the user equipment should set the user equipment TFCI threshold to equal the user equipment threshold Dtx after entering into DTX mode [0051-0059] of Obuchi.

Regarding **claim 39,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized in that said information comprises a delay due to user equipment Ptx power information element defining a period in which the user equipment is not using a maximum bit rate due to a user equipment Ptx power limitation [0051-0059] of Obuchi.

Regarding **claim 40,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized by said information comprising a TrCH under Node B control information element indicating transport channels which are under scheduling control of said network element for use by said network element for scheduling purposes [0051-0059] of Obuch.

Regarding **claim 41,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 40, characterized by said network element able to control some TrCHs in a Coded Composite Transport Channel (CCTrCH) with a number of transport channels (TrCH) combined to it [0051-0059] of Obuchi.

Regarding **claim 42,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 27, characterized by said information comprising a user equipment capabilities information or user equipment category information i.e., provided from the radio network controller to the network element for providing information related to user equipment capabilities for an enhanced dedicated channel or alternatively the user equipment capabilities may be categorized and the user equipment category parameter can be signaled to the network element [0006-0019] of Lee.

Regarding **claim 43,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 42, characterized by said information comprising an HARQ memory partitioning information element for providing information for HARQ memory usage [0052-0057] of Lee.

Regarding **claim 44,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 7, characterized by said information providing a transmission delay that the user equipment has to expect before it is allowed to ask for a higher data rate or RLC buffer size or RLC window size [0004-0028] of Lee.

Regarding **claim 45,** the combination of Lee/Nishimura/Gopalakrishna/Obuchi teach the data structure of claim 7, characterized by said information comprising QoS

parameter to assist the network element in scheduling which user equipments have priority for data rates, traffic class, and other parameters relating to QoS [0004-0028] of Lee.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Vu whose telephone number is (571) 272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael T. Vu

JEAN GELIN
PRIMARY EXAMINER